August 29, 2013

COMMENT:
FCC RULEMAKING ON E-RATE PROGRAM FOR SCHOOLS AND LIBRARIES
WC Docket Number 13-184

Thank you for this opportunity to comment on "Modernizing the E-Rate program for schools and libraries. "

As stated, I applaud President Obama's ConnectED initiative and the FCC's efforts to encourage schools to tap bulk purchase models and modernize the E-rate program.

However, when discussing the importance of adequate broadband and wireless connectivity for students and schools, there are several areas that are missing from the discussion. These are areas critical to 21st Century Education and reflect the changing roles schools play in communities across the country. Most importantly, school Operational Efficiency dependence on better broadband and Wi-Fi is not recognized.

We recommend upgrading the national broadband strategy for schools and libraries and the E-rate program to include:

- **Broadband and Wi-Fi to improve school operations**
  Automation through wirelessly-connected sensors and cloud-based management platforms can enable schools to better manage facilities, automate response and cost effectively improve school/campus health.

- **Health, Safety and Student Performance improved by wireless sensors**
  Specifically, broadband is enabling Operational Efficiency to secure campuses, improve student performance and increase student health prospects through wireless:
  o Security Monitoring
  o Air quality control (e.g. classroom CO_2, HVOC monitoring for asthmatics)
  o Temperature adjustment (e.g. energy efficiency, ease local adjustments)
  o Acoustics analysis (indoor and outdoor impacts)
  o Lighting monitoring and controls
  o Water monitoring and controls (e.g. leak detection)
  o Other: with costs lowering, new technologies are emerging and being deployed

- **Better training and support for school IT staff**
  - ○ Access control:
    We need firm, expert-led definitions and updated guidelines that acknowledge BYOD (bring your own device) but do not hinder access. This is particularly true for wirelessly connected controls and sensors used to manage buildings and secure campuses.
  - ○ Capacity Controls:
    As more building automation is utilized, the impact on actual bandwidth is minimal. Better understanding of full-campus use of broadband needs to be part of IT education.

- **Plug-load and charging capacity**
  Many schools are tapping Demand Response pricing schemas to help lower their energy utility bills. However, as more broadband and wireless connectivity becomes available, it's not only the financing of more fiber and backbone capacity that impacts communities and schools. It is also the recognition of the energy impact on schools as more devices are used daily and students and staffs power more of their own devices at schools.

- **Group purchasing of more than just the "pipe"**
  More up to date firewall, routing and updated access points with controls capable of managing all applications -- video conferencing, streaming, apps, building automation and sensors -- will need to coexist over the same last mile conduits to classrooms, libraries and offices.

Thank you for the opportunity to comment and for updating the E-rate program to more appropriately reflect the ways schools operate and our students are learning.

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